

REMARKS

This Amendment and Response is submitted in reply to the Office Action mailed November 6, 2003. Claims 55-63 and 65 were withdrawn from consideration. Claims 39-49 were objected to. Claims 1-54 and 64 are pending. Reexamination and reconsideration is respectfully requested.

Claims 11, 19, 21-29 and 33 were rejected under 35 U.S.C §112(2) as being indefinite. Appropriate corrections have been made.

Claims 1-15, 18-31, 34-36, 52-53 and 64 were rejected under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, obvious under 35 U.S.C. § 103(a) over U.S. Patent No. 4,752,513 (Rau et al.). Rau discloses reinforcement mats for use in pultrusion that are combinations of at least two mats held together by a mechanical attachment process (i.e., needling with barbed needles) to provide a composite mat that will withstand the pulling forces encountered during pultrusion without damage. (Rau, column 2, lines 4-10). The mats of Rau are constructed from randomly oriented fibers.

----- "Composite Mats produced in accordance with the instant invention are composed of a lightweight continuous surface mat and an continuous strand reinforcing mat. Both mats are characterized by having the fibers randomly distributed throughout the mat." -----

(Rau, column 3, lines 7-11). In essence, Rau teaches what is known in the art as "swirl" mats. The randomly arranged fibers of Rau provide unpredictable levels of lateral strength.

By contrast, the present invention is directed to a plurality of reinforcing fibers generally traverse to the longitudinal pull direction attached to a transport web, such as illustrated in Figures 4-28 of the present application. The term "transverse" refers to a direction generally perpendicular to the 0° or longitudinal pull direction +/- 30°, and typically +/-20°, in a plane of a reinforcing mat. (specification, page 19, lines 25-27). The randomly oriented fibers of Rau do not teach or suggested the claimed "reinforcing fibers generally traverse to the longitudinal pull direction."

The claimed permeable transport web provides sufficient structural integrity that the generally transverse reinforcing fibers maintain their transverse orientation even when subjected to the pulling forces encountered during pultrusion. Orienting the first reinforcing fibers generally transverse to the longitudinal pull direction provides a high

degree of lateral reinforcement in the reinforcing structure. Moreover, the claimed structure provides predictable levels of lateral strength, not possible with randomly distributed fibers such as the swirl mat of Rau. Consequently, Applicants submit that claims 1 and 64, and the claims that depend therefrom, distinguish over the cited reference and are in condition for allowance.

Claims 16-17 and 38 were rejected under 35 U.S.C. §103(a) as being unpatentable over Rau and further in view of U.S. Patent No. 3,761,345 (Smith). In light of the allowability of claim 1 discussed above, applicants respectfully submit that claims 16-17 and 38 distinguish over the cited references and are in condition for allowance.

Claim 32-33 and 37 were rejected under 35 U.S.C. §103 as being unpatentable over Rau, and further in view of U.S. Patent No. 5,908,689 (Dana et al.). Dana discloses a reinforced polymeric composite having a primary layer formed from a plurality of randomly oriented essentially continuous glass fiber strands. (Dana, column 3, lines 24-26). The secondary layer comprises a plurality of fiber strands of discontinuous lengths. (Dana, column 11, lines 43-44). The randomly oriented fibers of Dana do not anticipate the claimed “plurality of reinforcing fibers generally traverse to the longitudinal pull direction attached to a transport web”. Since Rau also lacks this claimed feature, as discussed above, no prima facie case of obviousness is set forth. In light of the allowability of claim 1 discussed above applicants respectfully submit that claims 32-33 and 37 distinguish over the cited references and are in condition for allowance.

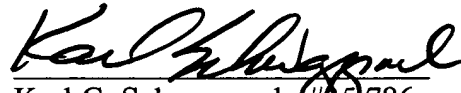
Claims 50, 51 and 54 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,910,458 (Beer et al.) in view of Rau. Beer teaches a reinforcing mat that includes a primary layer of generally parallel, essentially continuous glass fiber strands oriented generally parallel to a longitudinal axis of the mat and a secondary layer includes a plurality of randomly oriented chopped and/or continuous glass fiber strands. (Beer, column 14, lines 3-29). The strands of the primary layer are entangled with the strands of the secondary layer to form the reinforcing mat. Beer does not teach or suggest the claimed “plurality of reinforcing fibers generally traverse to the longitudinal pull direction attached to a transport web”. Since Rau also lacks this claimed feature, as discussed above, no prima facie case of obviousness is set forth. In light of the allowability

of claim 1 discussed above applicants respectfully submit that claims 50, 51 and 54 distinguish over the cited references and are in condition for allowance.

A credit card payment form in the amount of \$950.00 covering the fee for a Three-month extension of time is enclosed. No additional fee is believed to be necessary. Should an additional fee be required, however, the Commissioner is authorized to charge our deposit account no. 06-0029 and notify us of the same.

Respectfully Submitted,

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